

REMARKS

Claims 1-12 and 15-38 are pending in this application. Claims 1-12 and 15-38 are rejected. No new matter has been added. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 1 and 16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatfield et al. (U.S. Patent 5,779,641), hereafter Hatfield, in view of Hossack et al. (U.S. Patent 6,116,244), hereafter Hossack and Sumanaweera et al. (U.S. Patent 6,852,081), hereafter Sumanaweera. Claim 25 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatfield in view of Hossack and further in view of Schoolman (U.S. Patent 5,488,952). Claims 2-8 and 17-21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatfield in view of Hossack and Sumanaweera and further in view of Baldwin et al. (U.S. Patent 4,827,413), hereafter Baldwin. Claims 27-30 and 32-34 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatfield in view of Hossack and Schoolman and further in view of Baldwin. Claims 9, 10, 22 and 23 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatfield in view of Hossack, Sumanaweera and Baldwin and further in view of Drebin et al. (U.S. Patent 4,835,712). Claim 35 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatfield in view of Hossack, Schoolman and Baldwin and further in view of Drebin et al. Claims 11, 12, 15 and 24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatfield in view of Hossack, Sumanaweera and Baldwin and further in view of Vining (U.S. Patent 6,083,162). Claims 36-38 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatfield in view of Hossack, Schoolman and Baldwin and further in view of Vining. Claim 26 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatfield in view of Hossack and Schoolman and further in view of Ramanujam (U.S. Patent 5,570,460). Applicant respectfully traverses these rejections for at least the reasons set forth below.

Applicant has amended independent claims 1 and 16. Specifically, claim 1 has been amended to recite graphics processing circuitry for a medical ultrasound system comprising “a vertex data block storing vertex entries that define rendering shapes, the rendering shapes

including a series of triangles that form a triangle strip and that share at least one common vertex.” None of the cited art describes a triangle strip wherein the triangles share at least one common vertex. The Office Action cites Sumanaweera for describing a triangle strip having triangles that are ordered to form sets defining a triangle strip. However, each pair of triangles share two vertices, but all of the triangles that form the triangle strip do not share a common vertex. The triangles in Sumanaweera are ordered in such a way that these triangles cannot together share a common vertex. The polygon shaped rendering of Sumanaweera does not provide any common vertex for all of the triangles. Thus, Applicant submits that claim 1 is allowable over the cited prior art.

Claim 16, as amended, recites a medical ultrasound imaging system wherein “the signal processor stores image data entries for at least one ultrasound beam in a data block in the graphics memory, stores vertex entries that define blending shapes in a vertex data block in the graphics memory, and initiates rendering of the volume according to a plurality of rendering planes defined by one of a plurality of sets of rendering geometries, each of the sets of rendering geometries defining at least one different rendering plane for one of a different depth and curved surface.” Applicant respectfully submits that the cited prior art fails to describe such a medical ultrasound imaging system. Although Sumanaweera may describe a plurality of rendering planes represented by each triangle in the series of triangles (see, Office Action, page 5), these rendering planes for the triangles are not different rendering definitions that are defined by different depths or curved surfaces. Thus, Applicant submits that claim 16 is allowable over the cited prior art.

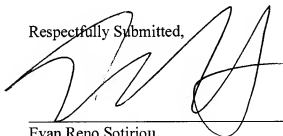
Claim 25 recites a method for rendering a volume in a medical ultrasound imaging system comprising “initiating volume rendering of the dataset by a graphics processing unit by blending the rendering planes to form a first volume rendering from a first viewing direction and a second volume rendering from a second viewing direction, the first and second viewing directions defining a stereoscopic volume rendering.” Applicant respectfully submits that the cited prior art fails to teach such a method. Although Schoolman may describe forming a stereoscopic display for an ultrasound image, the left and right stereoscopic components are generated from different angles, not from different viewing directions as recited in claim 25.

Different angles may be generated from the same viewing direction. Thus, Applicant submits that claim 25 is allowable over the cited prior art.

The additional prior art relied on in connection with Hatfield, Hossack, Sumanaweera and Schoolman to reject the dependent claims does not make up for the deficiencies in these references. Accordingly, dependent claims 2-12, 15, 17-24 and 26-38 are likewise patentable over the cited art based at least on the dependency of these claims from an independent claim, each of which is submitted to be allowable over the prior art.

In view of the foregoing amendments and remarks, it is respectfully submitted that the prior art neither anticipates nor renders obvious the claimed invention and the pending claims in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,



Evan Reno Sotiriou
Registration No. 46,247
THE SMALL PATENT LAW GROUP LLP
611 Olive Street
Suite 1611
St. Louis, MO 63101
(314) 584-4080